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APPLYING THE DORMANT SPRAY ECONOMICALLY:

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A radio talk from material supplied by E. J. Newcomer, Senior Entomologist, in charge of the Yakima, Washington Laboratory of Deciduous Fruit Insect Investigations, Bureau of Entomology, United States Department of Agriculture, delivered by R. H. Lamb during the Western Farm and Home Hour Tuesday, March 1, 1932, through Stations KGW, KOMO, KGHL, KGIR and KSL, five of the ten stations associated with the NBC-KGO network, Pacific Division, National Broadcasting Company.

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Economy and reintegration are watchwords of the present era. With depressed commodity prices, lower production costs must follow if we are to stay in business. Yet there are economies which it is not wise to practice. Limitation or elimination of spraying is one of these, unless we are sure of just what we are doing. So today we are to consider the question of spraying fruit trees economically and still adequately protect our orchards against pests. Our counselor will be E. J. Newcomer, senior entomologist in charge of the Yakima, Washington, laboratory of deciduous fruit insect investigations for the Bureau of Entomology. Mr. Newcomer, realizing that the cost of dormant sprays will undoubtedly be more of a factor this season than usual, believes that suggestions can be given which will aid you in determining the most economical way to handle your individual problems.

First, he suggests the possibility of omitting the dormant spray altogether. Of course, this is dependent on whether or not there is San Jose scale present in your orchard. If you know that your fruit had no scale on it when picked, and you found none when you pruned, and there is very little in the neighborhood, then it would almost surely be a waste of money to spray. The only exceptions would be pear orchards that have been troubled with blister mite, and peach orchards that are infested with the twig borer or peach worm or that threaten to have a big infestation of peach aphids. The latter can often be determined by making a careful examination of the buds when they begin to swell. In all of these cases, later sprays do little or no good. Minor apple pests, however, such as red spiders, can be controlled more economically with summer sprays, if scale is not present.

Another possibility of economy, Mr. Newcomer says, lies in reducing somewhat the strength of the dormant spray. Emulsions containing 4 per cent oil or 11 gallons of 32 degree lime-sulphur to make 100 gallons of spray are usually recommended. If the evidence of harvested fruit and of pruning shows only a very light scattering of scale, these quantities may be reduced to 3 per cent oil and 9 gallons of lime-sulphur, respectively. Spraying should always be thorough, but if any reduction in the strength is made, the job must be extremely thorough and not attempted in windy weather. Only a portion of your orchard may be infested, and in that case, only that portion need be sprayed. In other words, spraying for scale is not of much value as a preventative; if scale is not present in your orchard, or if present, is not hit by the spray, there is little use in spraying.

Some growers, Mr. Newcomer continues, feel that they can save money by making their own oil sprays. The actual saving will depend on your ability to make a good emulsion, and on how much additional labor you hire to make it. Directions for making and using oil emulsions may be found in Farmers' Bulletin

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No. 1676, "Lubricating Oil Sprays for Use on Dormant Fruit Trees". The formula on page 8 of that bulletin is the most satisfactory one for the Pacific Northwest. Before deciding whether or not to make your own emulsion, it would be well to make a careful comparison of the prices for which oil and the prepared oil emulsion may be obtained. In many cases, the home-made emulsion will be the cheaper.

Another very important factor in cutting costs, according to Mr. Newcomer, lies in early spraying. Ordinarily, either lime-sulphur or oil may do some damage to fruit buds if used after March 21, under Pacific Northwest conditions. Even more important than this is that fact that more good spraying weather occurs early than late. This probably varies in different localities, but it is at least true in the large fruit districts of central Washington. E. H. Jones, meteorologist of the Weather Bureau stationed at Yakima, has gone over his records, and he finds that from March 1 to 21, only about half of the days are too windy for spraying, but that after March 21, two-thirds of them are too windy. Thorough spraying is economical spraying, and thorough spraying cannot be done in windy weather. Spray is wasted and a poor job is done. There is no orchard operation, aside from irrigating and codling moth control, that is of so much immediate importance as the dormant spray if there is scale present in your orchard.

Again, the bulletin which Mr. Newcomer recommends for those intending to mix their own oil emulsions is Farmers' Bulletin No. 1676, "Lubricating Oil Sprays for Use on Dormant Fruit Trees." If you are in immediate need of copy, it is quite possible that your nearest county agent can supply you with one. We will be glad to order a copy for you. If you don't need a copy right away, address your request to this station and we will instruct our Washington, D. C. office to mail you one. If you do write to us for Farmers' Bulletin No. 1676, we suggest that you also ask for a copy of Farmers' Bulletin No. 1666, titled "Insecticides, Equipment and Methods for Controlling Orchard Pests". This ninety-page bulletin includes a general classification of insecticides and will be found valuable for reference.

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